In the Claims

1-29 (Canceled).

30. (New) A composition of matter comprising:

a) an isolated, purified or isolated and purified polynucleotide sequence comprising:

1) a polynucleotide sequence encoding: i) a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

2) a complementary polynucleotide sequence to: i) a polynucleotide sequence encoding a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polynucleotide sequence encoding a polypeptide sequence as set forth in Tables 2, 3, 4, 5, or 6;

3) a polynucleotide sequence having at least about 20% to 99.99% identity to a polynucleotide sequence of (1) or (2);

4) a fragment of a polynucleotide sequence according to (1) or (2);

5) a polynucleotide sequence encoding a variant of: i) a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

6) a polynucleotide sequence encoding a polypeptide fragment of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment has substantially the same serologic reactivity as the native polypeptide and substantially the same T-cell reactivity as the native polypeptide or fragment;

7) a polynucleotide sequence encoding a fragment of a variant polypeptide of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment of the variant polypeptide has substantially the same serologic activity as the native polypeptide or substantially the same T-cell reactivity as the native polypeptide or fragment;

8) a polynucleotide sequence encoding a multi-epitope construct;

9) a primer or detection probe for hybridization with a target sequence or the amplicon generated from a target sequence comprising a sequence of at least 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, or 100 consecutive nucleotides of the polynucleotide sequences according to (1), (2), (3), (4), (5), (6), (7), or (8); or

10) a polynucleotide sequence according to (1), (2), (3), (4), (5), (6), (7), or (8) that further comprises regulatory sequences;

b) a DNA chip comprising:

1) a polynucleotide sequence encoding: i) a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

2) a complementary polynucleotide sequence to: i) a polynucleotide sequence encoding a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polynucleotide sequence encoding a polypeptide sequence as set forth in Tables 2, 3, 4, 5, or 6;

3) a polynucleotide sequence having at least about 20% to 99.99% identity to a polynucleotide sequence of (1) or (2);

4) a fragment of a polynucleotide sequence according to (1) or (2);

5) a polynucleotide sequence encoding a variant of: i) a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

6) a polynucleotide sequence encoding a polypeptide fragment of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment has substantially the same serologic reactivity as the native polypeptide and substantially the same T-cell reactivity as the native polypeptide or fragment;

7) a polynucleotide sequence encoding a fragment of a variant polypeptide of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment of the variant polypeptide has substantially the same serologic activity as the native polypeptide or substantially the same T-cell reactivity as the native polypeptide or fragment;

8) a polynucleotide sequence encoding a multi-epitope construct; or

9) a primer or detection probe for hybridization with a target sequence or the amplicon generated from a target sequence comprising a sequence of at least 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, or 100 consecutive nucleotides of the polynucleotide sequences according to (1), (2), (3), (4), (5), (6), (7), or (8);

c) a vector comprising a promoter operably linked to a nucleic acid sequence comprising:

1) a polynucleotide sequence encoding: i) a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

2) a complementary polynucleotide sequence to: i) a polynucleotide sequence encoding a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polynucleotide sequence encoding a polypeptide sequence as set forth in Tables 2, 3, 4, 5, or 6;

3) a polynucleotide sequence having at least about 20% to 99.99% identity to a polynucleotide sequence of (1) or (2);

4) a fragment of a polynucleotide sequence according to (1) or (2);

5) a polynucleotide sequence encoding a variant of: i) a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

6) a polynucleotide sequence encoding a polypeptide fragment of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment has substantially the same serologic reactivity as the native polypeptide and substantially the same T-cell reactivity as the native polypeptide or fragment;

7) a polynucleotide sequence encoding a fragment of a variant polypeptide of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment of the variant polypeptide has substantially the same serologic activity as the native polypeptide or substantially the same T-cell reactivity as the native polypeptide or fragment;

8) a polynucleotide sequence encoding a multi-epitope construct; or

9) a primer or detection probe for hybridization with a target sequence or the amplicon generated from a target sequence comprising a sequence of at least 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, or 100 consecutive nucleotides of the polynucleotide sequences according to (1), (2), (3), (4), (5), (6), (7), or (8);

d) a host cell comprising:

1) a vector according to (c); or

2) an isolated, purified or isolated and purified polynucleotide according to (a); or

e) an isolated polypeptide comprising:

1) SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27;

2) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

3) a fragment of a polypeptide or a variant polypeptide of: a) a polypeptide set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27; or b) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6, wherein said fragment or variant has substantially the same serologic reactivity or substantially the same T-cell reactivity as the native polypeptide;

4) a variant polypeptide having at least about 20% to 99.99% identity to a polypeptide provided in Table 2, 3, 4, 5, or 6 or selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27;

5) a polypeptide epitope as set forth in Table 2, 3, 4, 5, or 6; or

6) a multi-epitope construct: i) comprising at least one epitope set forth in Table 2, 3, 4, 5, or 6; ii) comprising a polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27 and at least one epitope set forth in Table 2, 3, 4, 5, or 6; or iii) comprising and at least one epitope set forth in Table 2, 3, 4, 5, or 6 and one or more polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or

f) an isolated antibody that specifically binds an isolated polypeptide comprising:

1) SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27;

2) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

3) a fragment of a polypeptide or a variant polypeptide of: a) a polypeptide set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27; or b) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6, wherein said fragment or variant has substantially the same serologic reactivity or substantially the same T-cell reactivity as the native polypeptide;

4) a variant polypeptide having at least about 20% to 99.99% identity to a polypeptide provided in Table 2, 3, 4, 5, or 6 or selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27;

5) a polypeptide epitope as set forth in Table 2, 3, 4, 5, or 6; or

6) a multi-epitope construct: i) comprising at least one epitope set forth in Table 2, 3, 4, 5, or 6; ii) comprising a polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27 and at least one epitope set forth in Table 2, 3, 4, 5, or 6; or iii) comprising and at least one epitope set forth in Table 2, 3, 4, 5, or 6 and one or more polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27.

31 (New): The composition of matter according to claim 30, wherein said polynucleotide further comprises a label.

32 (New): The composition of matter according to claim 31, wherein said label is a: 1) radioactive label, 2) enzyme label, 3) chemiluminescent label, 4) fluorescent label, or 5) magnetic label.

33 (New): The composition of matter according to claim 30, wherein said regulatory sequences are promoters, enhancer elements, or termination sequences that are operably linked to a polynucleotide.

34 (New): The composition of matter according to claim 30, wherein said vector comprises a promoter operably linked to a nucleic acid sequence.

35 (New): The composition of matter according to claim 34, wherein said vector contains one or more origins of replication.

36 (New): The composition of matter according to claim 35, wherein said vector contains one or more selectable markers.

37 (New): The composition of matter according to claim 34, wherein said vector contains one or more selectable markers.

38 (New): The composition of matter according to claim 34 vector according to claim 9, wherein said vector is a vaccine vector or a viral vector.

39 (New): The composition of matter according to claim 30, wherein said composition of matter further comprises a pharmaceutically acceptable carrier.

40 (New): The composition of matter according to claim 39, wherein said carrier is an adjuvant.

41 (New): The composition of matter according to claim 30, wherein the polypeptide epitope is a CTL-inducing peptide epitope or a HTL-inducing peptide epitope.

42 (New): The composition of matter according to claim 30, wherein said antibody binds an epitope that a CTL-inducing peptide epitope or a HTL-inducing peptide epitope.

43 (New): A method of inducing an immune response in an individual comprising the administration of a composition of matter to an individual in an amount sufficient to induce an immune response, wherein said composition of matter is:

a) an isolated, purified or isolated and purified polynucleotide sequence comprising:

1) a polynucleotide sequence encoding: i) a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

2) a complementary polynucleotide sequence to: i) a polynucleotide sequence encoding a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polynucleotide sequence encoding a polypeptide sequence as set forth in Tables 2, 3, 4, 5, or 6;

3) a polynucleotide sequence having at least about 20% to 99.99% identity to a polynucleotide sequence of (1) or (2);

4) a fragment of a polynucleotide sequence according to (1) or (2);

5) a polynucleotide sequence encoding a variant of: i) a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

6) a polynucleotide sequence encoding a polypeptide fragment of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment has substantially the same serologic reactivity as the native polypeptide and substantially the same T-cell reactivity as the native polypeptide or fragment;

7) a polynucleotide sequence encoding a fragment of a variant polypeptide of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment of the variant polypeptide has substantially the same serologic activity as the native polypeptide or substantially the same T-cell reactivity as the native polypeptide or fragment; or

8) a polynucleotide sequence encoding a multi-epitope construct; or

b) an isolated polypeptide comprising:

1) SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27;

2) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

3) a fragment of a polypeptide or a variant polypeptide of: a) a polypeptide set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27; or b) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6, wherein said fragment or variant has substantially the same serologic reactivity or substantially the same T-cell reactivity as the native polypeptide;

4) a variant polypeptide having at least about 20% to 99.99% identity to a polypeptide provided in Table 2, 3, 4, 5, or 6 or selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27;

5) a polypeptide epitope as set forth in Table 2, 3, 4, 5, or 6; or

6) a multi-epitope construct: i) comprising at least one epitope set forth in Table 2, 3, 4, 5, or 6; ii) comprising a polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27 and at least one epitope set forth in Table 2, 3, 4, 5, or 6; or iii) comprising and at least one epitope set forth in Table 2, 3, 4, 5, or 6 and one or more polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27.

44 (New): A method of detecting a *P. falciparum* antigen comprising contacting a biological sample obtained from an individual with:

a) an isolated, purified or isolated and purified polynucleotide sequence comprising:

1) a polynucleotide sequence encoding: i) a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

2) a complementary polynucleotide sequence to: i) a polynucleotide sequence encoding a polypeptide sequence selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polynucleotide sequence encoding a polypeptide sequence as set forth in Tables 2, 3, 4, 5, or 6;

3) a polynucleotide sequence having at least about 20% to 99.99% identity to a polynucleotide sequence of (1) or (2);

4) a fragment of a polynucleotide sequence according to (1) or (2);

5) a polynucleotide sequence encoding a variant of: i) a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27; or ii) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

6) a polynucleotide sequence encoding a polypeptide fragment of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment has substantially the same serologic reactivity as the native polypeptide and substantially the same T-cell reactivity as the native polypeptide or fragment;

7) a polynucleotide sequence encoding a fragment of a variant polypeptide of a polypeptide selected from the group consisting of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, wherein the fragment of the variant polypeptide has substantially the same serologic activity as the native polypeptide or substantially the same T-cell reactivity as the native polypeptide or fragment; or

8) a polynucleotide sequence encoding a multi-epitope construct; or

b) an isolated polypeptide comprising:

1) SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27;

2) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6;

3) a fragment of a polypeptide or a variant polypeptide of: a) a polypeptide set forth in SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, or 27; or b) a polypeptide as set forth in Tables 2, 3, 4, 5, or 6, wherein said fragment or variant has substantially the same serologic reactivity or substantially the same T-cell reactivity as the native polypeptide;

4) a variant polypeptide having at least about 20% to 99.99% identity to a polypeptide provided in Table 2, 3, 4, 5, or 6 or selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27;

5) a polypeptide epitope as set forth in Table 2, 3, 4, 5, or 6; or

6) a multi-epitope construct: i) comprising at least one epitope set forth in Table 2, 3, 4, 5, or 6; ii) comprising a polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27 and at least one epitope set forth in Table 2, 3, 4, 5, or 6; or iii) comprising and at least one epitope set forth in Table 2, 3, 4, 5, or 6 and one or more polypeptide selected from the group consisting of SEQ ID NO: NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27;

and detecting the formation of a nucleic acid hybrid or an antigen-antibody complex.